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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/661,535

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EXAMINER

SHERMAN, STEPHEN G

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

02/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/661,535

Applicant(s)

HIRAKAWA ET AL.

Examiner

Stephen G. Sherman

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,20,23 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,20,23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to the amendment filed the 26 December 2007. Claims 1, 20, 23 and 24 are pending. Claims 2-19 and 21-22 have been cancelled.

Response to Arguments

2. Applicant's arguments filed on 26 December 2007 have been fully considered but they are not persuasive.

On page 2 of the response the applicant argues that the references of Correa and Sano fail to teach the claimed limitations as amended because "Correa discusses using a self-priming subfield having a soft prime and an address longer than that of a refresh subfield. The applicant then states that one benefit of the embodiment according to claim 1 is, for example, that "0 to 247 gradation levels can be displayed". The examiner respectfully disagrees.

First of all, page 16, lines 21-22 state that some gradation levels cannot be displayed using the embodiment of claim 1, so the applicant is wrong in saying that it can express 0 to 247 gradation levels. Therefore the specification seems to contradict itself in saying that 0 to 247 can be displayed but then saying some gradation levels cannot be displayed. Regardless, this is of no consequence to the rejection. Just because Correa discusses using a self-priming subfield having a soft prime and an address longer than that of a refresh subfield does not mean that the combination of

Art Unit: 2629

references does not teach the claimed limitations. Correa discusses that the subfield in which all cell to be written are written could be in the first or second subfield (as discussed in the rejection below), and also discusses of having a reset period in SF1 with a hard-prime (i.e. all-cell write discharge) before the address period, while San discloses in Figure 4 of having an all-cell write discharge in every subfield (refer to the rejection below). Therefore, the combination of references still teaches the invention as claimed.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 20, 23 and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1 and 20 each state the limitation "writing, in any subfield including and subsequent to the second subfield, all of the cells to be written in the respective address periods of the plurality of successive display subfields in the display field". There is insufficient description in the specification to support this claim. The part of the

Art Unit: 2629

specification discussing the embodiment claimed begins on page 16, line 15 and continues to page 17, line 21, where page 17, lines 11-12 explicitly state that all of the cells to be lit in a display field have been lit in SF2. Thus all of the cells to be written are not written in any subfield subsequent to the second subfield. Therefore, this limitation cannot be included in the claims because there is not enough description in the specification to support this feature so as to convey to "one of ordinary skill" in the art at the time the invention was made that the inventor has possession of the claimed invention.

For the purposes of examination, the examiner will ignore the "subsequent" limitation that is not supported by the specification, and read the limitation as "writing, in any subfield including the second subfield, all of the cells to be written in the respective address periods of the plurality of successive display subfields in the display field".

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 20, 23 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 20 each state the limitation "writing, in any subfield including and subsequent to the second subfield, all of the cells to be written in the respective address periods of the plurality of successive display subfields in the display field". This limitation is unclear because the examiner is not sure whether the applicant means only

Art Unit: 2629

one of the subfields including and subsequent to the second subfield is written or does this mean that all of the subfields including and subsequent to the second subfield are written. Therefore, the claim is indefinite because the examiner is unclear as to the intentions of the limitations.

For the purposes of examination, since there is insufficient written description for the limitation anyways, as discussed above, the examiner will ignore the "subsequent" limitation and read the limitation as "writing, in any subfield including the second subfield, all of the cells to be written in the respective address periods of the plurality of successive display subfields in the display field".

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

Art Unit: 2629

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 1, 20, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Correa et al. (EP 1,174,850 A1) in view of Sano et al. (US 6,115,011).

Regarding claim 1, Correa et al. disclose a method for driving a plasma display panel, wherein a display field comprises a plurality of successive subfields having at least two different luminance weights, producing a gradation display, each display subfield comprises at least an address period to write cells to be lit in the display subfield in accordance with corresponding display data and a sustain period to cause light emission to occur in the written cells (Paragraph [0021]), said method comprising:

writing an all-write discharge in a first subfield having a lightest luminance weight (Paragraph [0012] and Paragraph [0022] explain that a priming pulse causes a discharge where all-cells are illuminated. Figures 1-3 show that priming pulses are applied at the beginning of the first subfield.),

writing, in any subfield including and subsequent to the second subfield, all of the cells to be written in the respective address periods of the plurality of successive display subfields in the display field (Paragraphs [0025]-[0029] explain that the first subfield is used to write all of the cells that are not to be black, i.e. all cells to be written in the display field. The chart at the top of column 6 illustrates this point, since there is a 0 in the first subfield for display data "0" and a 1 in the first subfield for all other display data

Art Unit: 2629

levels. Paragraph [0046] explains that Figure 2 shows an example where the first two subfields are SPSF, where paragraph [0025] explains that a SPSF is one in which all cells, that should not be black, are excited. Thus the first and second subfield is a SPSF and all of the cells to be written are written in any subfield including the second subfield.); and

applying sustain pulses to cause light emission in the respective sustain periods of the successive display subfields of the display field (Paragraph [0021] explains that subfields contain a sustain period to cause light emission.).

Correa et al. fail to teach of writing an all-cell write discharge in a second subfield having a second lightest luminance weight.

Sano et al. disclose a method for driving a plasma display panel, comprising generating an all-cell write discharge in a priming period of every subfield (Figure 4 shows that there is a priming period in every single subfield.).

Therefore, it would have been obvious to “one of ordinary skill” in the art at the time the invention was made to provide for priming period in every subfield as taught by Sano et al. in the method taught by Correa et al. such that the first and second subfields of the lightest weights would contain priming periods in order to use the priming discharging in an advantageous way so as to initialize all of the cells before writing.

Regarding claim 20, please refer to the rejection of claim 1, and furthermore Correa et al. also disclose a plasma display device comprising a plasma display panel and a driving circuit for the plasma display panel (Figure 4).

Regarding claims 23 and 24, Correa et al. and Sano et al. disclose the method for driving a plasma display panel as set forth in claim 1 and the plasma display panel as set forth in claim 20.

Correa et al. also disclose wherein a third subfield subsequent to the second subfield and a subfield after the third subfield each have a charge control period due to a charge control pulse different from the all-cell write discharge (Figure 2 shows that the third subfield is a RSF, where paragraph [0033] explain that writing pulses, i.e. charge control pulses, are used to control the charge in the cell, i.e. neutral or excited states.).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2629

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen G. Sherman whose telephone number is (571) 272-2941. The examiner can normally be reached on M-F, 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SS

29 January 2008

AMR A. AWAD
SUPERVISORY PATENT EXAMINER

